



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/639,599      | 08/16/2000  | Alex S. Toback       | TOB/102/US          | 2976             |

2543 7590 02/08/2005

ALIX YALE & RISTAS LLP  
750 MAIN STREET  
SUITE 1400  
HARTFORD, CT 06103

EXAMINER

OMGBA, ESSAMA

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3726

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/639,599

**Applicant(s)**

TOBACK, ALEX S.

**Examiner**

Essama Omgba

**Art Unit**

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

Art Unit: 3726

**DETAILED ACTION**

*and paper No. 16, dated 11/12/2004*

1. In view of the appeal brief filed on June 9, 2003, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Orowan (US Patent 3,655,424).

With regards to claims 1-3, 8-10, 16, 17, 19, 20, 22 and 23, Appellant, at pages 1 and 3 of the specification to be known as AAPA, discloses a connection system for light gauge steel construction and an assembly wherein numerous self-drilling screws or

Art Unit: 3726

other fasteners are used to provide the connection between a panel and a support structure. AAPA does not disclose applying an adhesive curable at room temperature to at least the panel or the support structure and placing them against each other.

However it is known to use an adhesive material between plates of a lap joint used in a connection with rivets or other fasteners as attested by Orowan, see column 1, lines 8-30 and figure 1. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used an adhesive material in the connection of AAPA, in light of the teachings of Orowan, in order to relieve the load on fasteners to a relatively small extent and give protection against fretting between the parts joined. Applicant should note that the connection of Orowan is significantly enhanced in load bearing capacity, see column 1, lines 24-29 in particular. Regarding the recitation of the adhesive being curable at room temperature, Applicant should note that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an adhesive curable at room temperature to supplement the fasteners in the connection taught by AAPA/Orowan as evidenced by Applicant's admission that such adhesives are known, see page 3, lines 8-13 of the specification, in order to realize the benefits of using such known and available adhesives. Furthermore the product-by-process limitation that the adhesive is curable at room temperature does not affect the claimed connection system and therefore does not impart patentability to the product. As outlined above the connection system in the product-by-process claim is obvious from the connection of AAPA/Orowan. Furthermore the connection system itself comprises epoxy adhesive and at least one fastener in the

Art Unit: 3726

joint. The fact that the adhesive was cured at room temperature does not further limit the structure of the final connection system. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Thorpe*, 777 F.2d 695, 698, 227USPQ 964, 966 (Fed. Cir. 1985).

For claims 4-7, 11-15, 18, 21 and 24, Applicant should note that it is within the general knowledge of one of ordinary skill in the art to select the appropriate adhesive for the connection and that fast setting adhesives are old and well known to those of ordinary skill in the art.

4. Claims 1-3, 16, 17, 19, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Orowan.

Applicant, at pages 1 and 3 of the specification to be known as AAPA, discloses a connection system for light gauge steel construction and an assembly wherein numerous self-drilling screws or other fasteners are used to provide the connection between a panel and a support structure. AAPA does not disclose applying an adhesive curable at room temperature to at least the panel or the support structure and placing them against each other. However it is known to use an adhesive material between plates of a lap joint used in a connection with rivets or other fasteners as attested by Orowan, see column 1, lines 8-30 and figure 1. Therefore it would have been obvious to

Art Unit: 3726

one of ordinary skill in the art at the time the invention was made, to have used an adhesive material in the connection of AAPA, in light of the teachings of Orowan, in order to relieve the load on fasteners to a relatively small extent and give protection against fretting between the parts joined. Applicant should note that the connection of Orowan is significantly enhanced in load bearing capacity, see column 1, lines 24-29 in particular. Regarding the recitation of the adhesive being curable at room temperature, Applicant should note that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an adhesive curable at room temperature to supplement the fasteners in the connection taught by AAPA/Orowan as evidenced by Applicant's admission that such adhesives are known, see page 3, lines 8-13 of the specification, in order to realize the benefits of using such known and available adhesives. Furthermore the product-by-process limitation that the adhesive is curable at room temperature does not affect the claimed connection system and therefore does not impart patentability to the product. As outlined above the connection system in the product-by-process claim is obvious from the connection of AAPA/Orowan. Furthermore the connection system itself comprises epoxy adhesive and at least one fastener in the joint. The fact that the adhesive was cured at room temperature does not further limit the structure of the final connection system. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though

Art Unit: 3726

the prior product was made by a different process. See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). For the recitation of "applying a bead of adhesive", owing to the commonly accepted meaning of the word "bead" to mean "a projecting band", the examiner contends that any coating of adhesive could be considered a "bead" and particularly the coating of adhesive as illustrated in figure 1 of Orowan is definitely a "bead".

5. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA/Orowan as applied to claim 1 above, and further in view of Good et al. (US Patent 4,426,425).

AAPA/Orowan discloses a connection system as shown above except for the adhesive being a two-part epoxy system comprising a resin and a hardener mixed in equal portions by weight or volume wherein the adhesive fully cures within 72 hours. However Good et al. teaches such adhesive, see column 2, lines 26-34 and 49-53 and column 3, lines 8-20. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a two-part epoxy adhesive system in the connection of AAPA/Orowan, in light of the teachings of Good et al., in order to achieve a superior shear and bond strength. Applicant should note that curable adhesives usually cure within 72 hours. Regarding the recitation of "a two-part epoxy system comprising a resin and hardener mixed in equal portions by weight or volume", as showed above Good et al. teaches a two-part epoxy system, see column 2, lines 49-53 and column 3, lines 8-25 where it is stated that "a useful range of hardener for the particular resin employed therein in parts by weight based on total parts by weight of

Art Unit: 3726

resin plus hardener of 100, is indicated to be 16 to 30, or more. The most effective amount of hardener for any particular resin system, and its application, including curing considerations, are readily ascertainable by those of ordinary skill in the art." It is the examiner's position that the "16 to 30 or more" statement in Good et al. includes 50% by weight of hardener. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a two-part epoxy with an equal amount by weight of resin and hardener in the connection system of AAPA/Orowan/Good et al. since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Furthermore Applicant admits at page 3 of the specification that two-part epoxy adhesives mixed in equal portions by weight or volume and curable at room temperature are known.

6. Claims 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Orowan and Good et al.

With regards to claims 8-10, Applicant, at pages 1 and 3 of the specification to be known as AAPA, discloses a connection system for light gauge steel construction wherein numerous self-drilling screws or other fasteners are used to provide the connection between a panel and a support structure. AAPA does not disclose applying a bead of epoxy curable at room temperature to at least the panel or the support structure and placing them against each other. However it is known to use an adhesive material between plates of a lap joint used in connection with rivets or other fasteners as attested by Orowan, column 1, lines 8-30 and figure 1. Furthermore, Good et al.



Art Unit: 3726

teaches using an epoxy as adhesive to adhere metal members, see column 2, lines 26-34. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have an epoxy adhesive in the connection of AAPA, in light of the teachings of Orowan and Good et al., in order to relieve the load on the fasteners to a relatively small extent and achieve a superior shear and bond strength. Appellant should note that the connection of Orowan is significantly enhanced in load bearing capacity, see column 1, lines 24-29 of Orowan. Regarding the recitation of the adhesive being curable at room temperature, Applicant should note that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an adhesive curable at room temperature to supplement the fasteners in the connection taught by AAPA/Orowan as evidenced by Applicant's admission that such adhesives are known, see page 3, lines 8-13 of the specification, in order to realize the benefits of using such known and available adhesives. Furthermore the product-by-process limitation that the adhesive is curable at room temperature does not affect the claimed connection system and therefore does not impart patentability to the product. As outlined above the connection system in the product-by-process claim is obvious from the connection of AAPA/Orowan. Furthermore the connection system itself comprises epoxy adhesive and at least one fastener in the joint. The fact that the adhesive was cured at room temperature does not further limit the structure of the final connection system. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in

Art Unit: 3726

the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Thorpe*, 777 F.2d 695, 698, 227USPQ 964, 966 (Fed. Cir. 1985). For the recitation of "applying a bead of adhesive", owing to the commonly accepted meaning of the word "bead" to mean "a projecting band", the examiner contends that any coating of adhesive could be considered a "bead" and particularly the coating of adhesive as illustrated in figure 1 of Orowan is definitely a "bead".

For claims 12-15, see column 2, lines 25-34 and column 3, lines 8-20 of Good et al.

7. Claims 18, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA/Orowan as applied to claims 16, 19 and 22 above, and further in view of Good et al.

AAPA/Orowan discloses a connection system and an assembly as shown above except for the adhesive being selected from the group consisting of epoxy, methacrylate and urethane or the adhesive being a two-part epoxy system. However Good et al, teaches such adhesive, see column 2, lines 25-29. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a two-part epoxy system as the adhesive of AAPA/Orowan, in light of the teachings of Good et al., in order to achieve superior shear and bond strength.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F (10-7:30) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Essama Omgba  
Primary Examiner  
Art Unit 3726

eo   
February 7, 2005